

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Previously Presented) An electroluminescence display device comprising:
a substrate; and
a plurality of pixels over the substrate, each of the plurality of pixels comprising:
 - a first thin film transistor;
 - a second thin film transistor comprising a gate electrode electrically connected to the first thin film transistor; and
 - an electroluminescence element electrically connected to the second thin film transistor,

wherein the first thin film transistor comprises at least two channel regions in an active layer, at least two gate electrodes corresponding to the channel regions, over the active layer with a gate insulating film interposed therebetween, and an impurity region interposed between the channel regions.

2. (Previously Presented) An electroluminescence display device comprising:
a substrate; and
a plurality of pixels over the substrate, each of the plurality of pixels comprising:
 - a first thin film transistor;
 - a second thin film transistor comprising a gate electrode electrically connected to the first thin film transistor; and
 - an electroluminescence element electrically connected to the second thin film transistor,

wherein the first thin film transistor comprises at least two channel regions in an active layer, at least two gate electrodes corresponding to the channel regions, over the active layer with a gate insulating film interposed therebetween, and an impurity region interposed between the channel regions, and

wherein a channel width of the second thin film transistor is greater than a channel width of the first thin film transistor.

3. (Currently Amended) An electroluminescence display device comprising:
a substrate; and
a plurality of pixels over the substrate, each of the plurality of pixels comprising:

a first thin film transistor;
a second thin film transistor comprising a gate electrode electrically
connected to the first thin film transistor; and
an electroluminescence element electrically connected to the second thin
film transistor,

wherein at least the first thin film transistor comprises an active layer in which two or
more channel regions connected in series are formed, and

wherein an equation of $W2/L2 \geq 5 \times W1/L1$ is established where a channel length of
the second thin film transistor is L2, a channel width of the second thin film transistor is W2,
a sum of each of channel length lengths of the channel regions of the first thin film transistor
is L1 and a channel width of the first thin film transistor is W1.

4. (Currently Amended) An electroluminescence display device according to
claim 3,

wherein the channel length of the second thin film transistor (L2) is 0.1 to 50 μm , the
channel width of the second thin film transistor (W2) is 0.5 to 30 μm , the sum of each of
channel ~~length~~ lengths of the channel regions of the first thin film transistor (L1) is 0.2 to 18
 μm and the channel width of the first thin film transistor (W1) is 0.1 to 5 μm .

5. (Previously Presented) An electroluminescence display device according to claim
1,

wherein the first thin film transistor is a switching thin film transistor and the second
thin film transistor is a current control thin film transistor.

6. (Previously Presented) an electroluminescence display device according to
claim 2,

wherein the first thin film transistor is a switching thin film transistor and the second
thin film transistor is a current control thin film transistor.

7. (Previously Presented) An electroluminescence display device according to claim 3,

wherein the first thin film transistor is a switching thin film transistor and the second thin film transistor is a current control thin film transistor.

8. (Previously Presented) an electroluminescence display device according to claim 1,

wherein each of the first and second thin film transistors has at least one lightly doped impurity region between a channel region and one of a drain region or the impurity region where the lightly doped impurity region of the first thin film transistor does not overlap a gate electrode of the first thin film transistor and the lightly doped impurity region of the second thin film transistor overlaps the gate electrode of the second thin film transistor at least partly.

9. (Previously Presented) an electroluminescence display device according to claim 2,

wherein each of the first and second thin film transistors has at least one lightly doped impurity region between a channel region and one of a drain region or the impurity region wherein the lightly doped impurity region of the first thin film transistor does not overlap a gate electrode of the first thin film transistor and the lightly doped impurity region of the second thin film transistor overlaps the gate electrode of the second thin film transistor at least partly.

10. (Previously Presented) An electroluminescence display device according to claim 3,

wherein each of the first and second thin film transistors has at least one lightly doped impurity region, wherein the lightly doped impurity region of the first thin film transistor does not overlap a gate electrode of the first thin film transistor, and the lightly doped impurity region of the second thin film transistor overlaps the gate electrode of the second thin film transistor at least partly.

11.-16. (Canceled).

17. (Withdrawn) An electroluminescence display device comprising:
a substrate; and
a plurality of pixels over the substrate, each of the plurality of pixels comprising:

- a first thin film transistor;
- a second thin film transistor comprising a gate electrode electrically connected to the first thin film transistor; and
- an electroluminescence element electrically connected to the second thin film transistor,

wherein the first thin film transistor comprises at least two gate electrodes over the substrate, at least two channel regions corresponding to the gate electrode, over the gate electrode with a gate insulating film interposed therebetween, and an impurity region interposed between the channel regions, and

wherein the impurity region has the same impurity concentration as a source or drain regions of the first thin film transistor.

18. (Withdrawn) An electroluminescence display device according to claim 17,
a channel width of the second thin film transistor is greater than a channel width of the first thin film transistor.

19. (Withdrawn-Previously Presented) An electroluminescence display device according to claim 17,

wherein each of the first and second thin film transistors has at least one lightly doped impurity region between a channel region and one of a drain region or the impurity region where the lightly doped impurity region of the first thin film transistor does not overlap a gate electrode of the first thin film transistor and the lightly doped impurity region of the second thin film transistor overlaps the gate electrode of the second thin film transistor at least partly.

20. (Withdrawn) An electroluminescence display device according to claim 17,
wherein the first thin film transistor is a switching thin film transistor and the second thin film transistor is a current control thin film transistor.

21. (Withdrawn-Currently Amended) An electroluminescence display device according to claim 17,

wherein an equation of $W2/L2 \geq 5 \times W1/L1$ is established where a channel length of the second thin film transistor is L2, a channel width of the second thin film transistor is W2, a sum of each of channel length lengths of the channel regions of the first thin film transistor is L1 and a channel width of the first thin film transistor is W1.

22. (Withdrawn-Currently Amended) An electroluminescence display device according to claim 21,

wherein the channel length of the second thin film transistor (L2) is 0.1 to 50 μm , the channel width of the second thin film transistor (W2) is 0.5 to 30 μm , the sum of each of channel length lengths of the channel regions of the first thin film transistor (L1) is 0.2 to 18 μm and the channel width of the first thin film transistor (W1) is 0.1 to 5 μm .

23. (Withdrawn) An electroluminescence display device according to claim 17,
wherein the substrate comprises a material selected from the group consisting of a glass, a glass ceramic, a quartz, a silicon, a ceramic, a metal, and a plastic.

24. (Canceled).

25. (Withdrawn) An electroluminescence display device comprising:

a substrate; and

a plurality of pixels over the substrate, each of the plurality of pixels comprising:

a first thin film transistor;

a second thin film transistor comprising a gate electrode electrically connected to the first thin film transistor; and

an electroluminescence element electrically connected to the second thin film transistor,

wherein the first thin film transistor comprises at least two gate electrodes over the substrate, at least two channel regions corresponding to the gate electrode, over the gate electrode with a gate insulating film interposed therebetween, and an impurity region interposed between the channel regions,

wherein a channel width of the second thin film transistor is greater than a channel width of the first thin film transistor, and

wherein the impurity region has the same impurity concentration as a source or drain regions of the first thin film transistor.

26. (Withdrawn) An electroluminescence display device according to claim 25, wherein the first thin film transistor is a switching thin film transistor and the second thin film transistor is a current control thin film transistor.

27. (Withdrawn) An electroluminescence display device according to claim 25, wherein the substrate comprises a material selected from the group consisting of a glass, a glass ceramic, a quartz, a silicon, a ceramic, a metal, and a plastic.

28. (Canceled).

29. (Previously Presented) An electroluminescence display device comprising:
a substrate; and
a plurality of pixels over the substrate, each of the plurality of pixels comprising:

a first thin film transistor;

a second thin film transistor comprising a gate electrode electrically connected to the first thin film transistor; and

an electroluminescence element electrically connected to the second thin film transistor,

wherein the first thin film transistor comprises an active layer in which at least two channel regions connected in series are formed with an impurity region interposed therebetween, and

wherein each of the first and second thin film transistors has at least one lightly doped impurity region between a channel region and one of a drain region or the impurity region where the lightly doped impurity region of the first thin film transistor does not overlap a gate electrode of the first thin film transistor and the lightly doped impurity region of the second thin film transistor overlaps the gate electrode of the second thin film transistor at least partly.

30. (Previously Presented) An electroluminescence display device according to claim 29,

wherein the first thin film transistor is a switching thin film transistor and the second thin film transistor is a current control thin film transistor.

31. (Previously Presented) An electroluminescence display device according to claim 29,

wherein the substrate comprises a material selected from the group consisting of a glass, a glass ceramic, a quartz, a silicon, a ceramic, a metal, and a plastic.

32. (Canceled).

33. (Previously Presented) An electroluminescence display device comprising:

a substrate; and

a plurality of pixels over the substrate, each of the plurality of pixels comprising:

- a switching element comprising an active layer and at least first and second gate electrodes adjacent to the active layer with a gate insulating film interposed therebetween;

- a current control element comprising a gate electrode electrically connected to the switching element; and

- an electroluminescence element electrically connected to the current control element.

34. (Previously Presented) An electroluminescence display device according to claim 33,

a channel width of the current control element is greater than a channel width of the switching element.

35. (Previously Presented) An electroluminescence display device according to claim 33,

wherein each of the switching element and current control element has at least one lightly doped impurity region, wherein the lightly doped impurity region of the switching

element does not overlap the first and second gate electrodes of the switching element and the lightly doped impurity region of the current control element overlaps the gate electrode of the current control element at least partly.

36. (Previously Presented) An electroluminescence display device according to claim 33,

wherein the substrate comprises a material selected from the group consisting of a glass, a glass ceramic, a quartz, a silicon, a ceramic, a metal, and a plastic.

37. (Canceled).

38. (Previously Presented) An electroluminescence display device comprising:
a substrate; and

a plurality of pixels over the substrate, each of the plurality of pixels comprising:

a switching element comprising an active layer and at least first and second gate electrodes adjacent to the active layer with a gate insulating film interposed therebetween;

a current control element comprising a gate electrode electrically connected to the switching element; and

an electroluminescence element electrically connected to the current control element,

wherein a channel width of the current control element is greater than a channel width of the switching element.

39. (Previously Presented) An electroluminescence display device according to claim 38,

wherein the substrate comprises a material selected from the group consisting of a glass, a glass ceramic, a quartz, a silicon, a ceramic, a metal, and a plastic.

40. (Canceled).

41. (Previously Presented) An electroluminescence display device comprising:

a substrate; and

a plurality of pixels over the substrate, each of the plurality of pixels comprising:

a switching element comprising an active layer and at least first and second gate electrodes adjacent to the active layer with a gate insulating film interposed therebetween;

a current control element comprising a gate electrode electrically connected to the switching element; and

an electroluminescence element electrically connected to the current control element,

wherein each of the switching element and the current control element has at least one lightly doped impurity region, wherein the lightly doped impurity region of the switching element does not overlap the first and second gate electrodes of the switching element and the lightly doped impurity region of the current control element overlaps the gate electrode of the current control element at least partly.

42. (Previously Presented) An electroluminescence display device according to claim 41,

wherein the substrate comprises a material selected from the group consisting of a glass, a glass ceramic, a quartz, a silicon, a ceramic, a metal, and a plastic.

43. (Canceled).

44. (Previously Presented) An electroluminescence display device comprising:

a substrate; and

a plurality of pixels over the substrate, each of the plurality of pixels comprising:

a switching element comprising at least two thin film transistors;

a current control element comprising a gate electrode electrically connected to the switching element; and

an electroluminescence element electrically connected to the current control element.

45. (Previously Presented) An electroluminescence display device according to claim 44,

a channel width of the current control element is greater than a channel width of the switching element.

46. (Previously Presented) An electroluminescence display device according to claim 44,

wherein each of the switching element and the current control element has at least one lightly doped impurity region, wherein the lightly doped impurity region of the switching element does not overlap a gate electrode of the switching element and the lightly doped impurity region of the current control element overlaps the gate electrode of the current control element at least partly.

47. (Previously Presented) An electroluminescence display device according to claim 44,

wherein the substrate comprises a material selected from the group consisting of a glass, a glass ceramic, a quartz, a silicon, a ceramic, a metal, and a plastic.

48. (Canceled).

49. (Previously Presented) An electroluminescence display device comprising:
a substrate; and

a plurality of pixels over the substrate, each of the plurality of pixels comprising:

a switching element comprising at least two thin film transistors;

a current control element comprising a gate electrode electrically connected to the switching element; and

an electroluminescence element electrically connected to the current control element,

wherein a channel width of the current control element is greater than a channel width of the switching element.

50. (Previously Presented) An electroluminescence display device according to claim 49,

wherein the substrate comprises a material selected from the group consisting of a glass, a glass ceramic, a quartz, a silicon, a ceramic, a metal, and a plastic.

51. (Canceled).

52. (Previously Presented) An electroluminescence display device comprising:
a substrate; and

a plurality of pixels over the substrate, each of the plurality of pixels comprising:

a switching element comprising at least two thin film transistors;

a current control element comprising a gate electrode electrically connected to the switching element; and

an electroluminescence element electrically connected to the current control element,

wherein each of the switching element and the current control element has at least one lightly doped impurity region, wherein the lightly doped impurity region of the switching element does not overlap gate electrodes of the switching element and the lightly doped impurity region of the current control element overlaps the gate electrode of the current control element at least partly.

53. (Previously Presented) An electroluminescence display device according to claim 52,

wherein the substrate comprises a material selected from the group consisting of a glass, a glass ceramic, a quartz, a silicon, a ceramic, a metal, and a plastic.

54. (Canceled)

55. (Previously Presented) An electroluminescence display device according to claim 1,

wherein a top surface of the impurity region is entirely in contact with the gate insulating film.

56. (Previously Presented) An electroluminescence display device according to claim 2,

wherein a top surface of the impurity region is entirely in contact with the gate insulating film.

57. (Previously Presented) An electroluminescence display device according to claim 3,

wherein, in a region between the channel regions, a top surface of the active layer is entirely in contact with a gate insulating film.

58. (Previously Presented) An electroluminescence display device according to claim 29,

wherein a top surface of the impurity region is entirely in contact with the gate insulating film.

59. (Previously Presented) An electroluminescence display device according to claim 33,

wherein, in a region between the first gate electrode and the second gate electrode, a top surface of the active layer is entirely in contact with the gate insulating film.

60. (Previously Presented) An electroluminescence display device according to claim 38,

wherein, in a region between the first gate electrode and the second gate electrode, a top surface of the active layer is entirely in contact with the gate insulating film.

61. (Previously Presented) An electroluminescence display device according to claim 41,

wherein, in a region between the first gate electrode and the second gate electrode, a top surface of the active layer is entirely in contact with the gate insulating film.

62. (Previously Presented) An electroluminescence display device according to claim 44,

wherein each of the thin film transistors of the switching element comprises a gate electrode and an active layer with a gate insulating film therebetween, and

wherein, in a region between the gate electrodes of the thin film transistors of the switching element, a top surface of the active layer is entirely in contact with the gate insulating film.

63. (Previously Presented) An electroluminescence display device according to claim 49,

wherein each of the thin film transistors of the switching element comprises a gate electrode and an active layer with an gate insulating film therebetween, and

wherein, in a region between the gate electrodes of the thin film transistors of the switching element, a top surface of the active layer is entirely in contact with the gate insulating film.

64. (Previously Presented) An electroluminescence display device according to claim 52,

wherein each of the thin film transistors of the switching element comprises an active layer with an gate insulating film between the gate electrodes and the active layer, and

wherein, in a region between the gate electrodes of the thin film transistors of the switching element, a top surface of the active layer is entirely in contact with the gate insulating film.